

MP-645-AT

Features:

- >> Maintenance free
- >> Convenient for installation
- >> Safety and no leakage
- >> Excellent recharge and discharge performance
- >> Low self-discharge rate

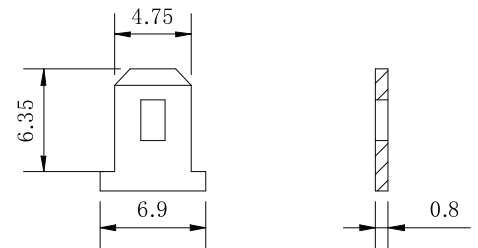
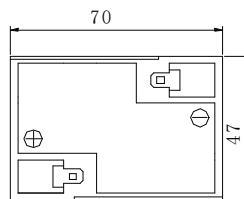
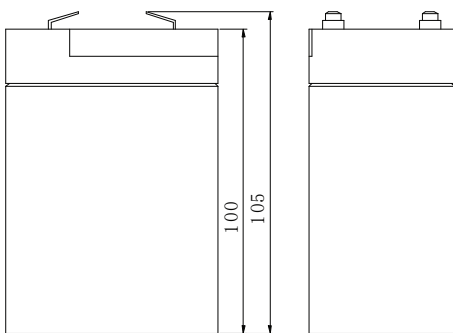
Application

- >> Lighting system
- >> Security system
- >> Electric toy
- >> Medical equipment
- >> Telecommunication system
- >> Power systems
- >> UPS
- >> Electric tools



Technical Specifications

Model	MP-645-AT			
Designed Service Life	5 years			
Capacity (25°C)	20HR	10HR	5HR	1HR
	(0.20A)	(0.372A)	(0.68A)	(2.40A)
	4.5AH	3.72AH	3.4AH	2.4AH
Dimension:mm	Length	Width	Height	Total Height
	70	47	100	105
Approx. Weight	0.71Kg			
Internal Resistance	Fully charged at 25°C: 0.029 Ohm			
Selfdischarge	3% of capacity declined per month at 25°C			
Capacity Affected by Temp. (20HR)	40°C	25°C	0°C	15 °C
	103%	100%	86%	65%
Charge Voltage (25°C)	Cycle use		Standby use	
	7.207.50V(12mV/ °C),		6.756.90V (9mV/ °C)	Max. Current: 1.35 A



Standard Terminal Dimensions

LEAVE POWER FOR MEDAL POWER

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Constant Current Discharge Data

Constant Current Discharge Data Sheet (Amperes at 25°C)

End	Minute (s)					Hour (s)					
	5	10	15	30	50	1	2	3	5	8	10
1.80	11.90	8.35	7.07	4.14		2.56	1.08	0.67	0.37	0.20	
1.75	12.90	9.05	7.19	4.25		2.63	1.11	0.67	0.38	0.20	
1.70	13.30	9.22	7.33	4.32		2.67	1.13	0.69	0.39	0.20	
1.65	13.70	9.40	7.42	4.37		2.69	1.16	0.71	0.40	0.21	
1.60	14.10	9.48	7.50	4.42		2.71	1.18	0.72	0.40	0.21	

Constant Power Discharge Data

Constant Power Discharge Data Sheet (Watts at 25°C)

End Voltage/cell	Minute (s)					Hour (s)				
	5	10	15	30	45	1	2	3	5	
1.80	22.70	15.90	13.30	7.84	5.87	4.89	2.76	2.04	1.40	
1.75	24.20	17.20	13.50	8.01	6.01	5.00	2.82	2.09	1.42	
1.70	25.10	17.40	13.60	8.16	6.08	5.06	2.85	2.11	1.45	
1.65	25.80	17.70	13.70	8.14	6.09	5.06	2.88	2.15	1.48	
1.60	26.30	17.70	13.80	8.19	6.11	5.07	2.90	2.18	1.49	

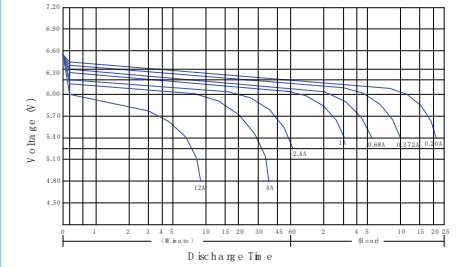
End Voltage

Discharge Rate	Discharge Current	End Voltage (V/cell)
20h	0.05C ₂₀ A (I ₂₀)	1.75
10h	0.09C ₂₀ A (I ₁₀)	1.75
3h	0.25C ₂₀ A (I ₃)	1.75
1h	0.60C ₂₀ A (I ₁)	1.60

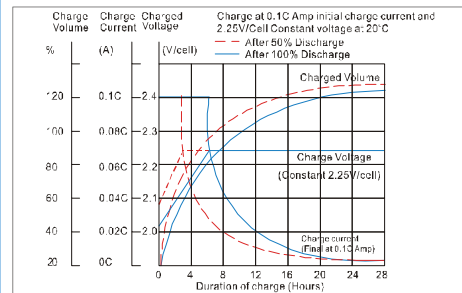
Storage Time VS Charge Time

Storage Time	Top up Charging Recommendation
Less than 6 months from production or previous top up charge	Maximum of 16 hours at a constant voltage of 2.40VPC
Less than 12 months from production or previous top up charge	Maximum of 20 hours at a constant voltage of 2.40VPC
Less than 6 months from production or previous top up charge	Maximum of 8 hours at a constant current of 0.1 C A
Less than 12 months from production or previous top up charge	Maximum of 10 hours at a constant current of 0.1 C A

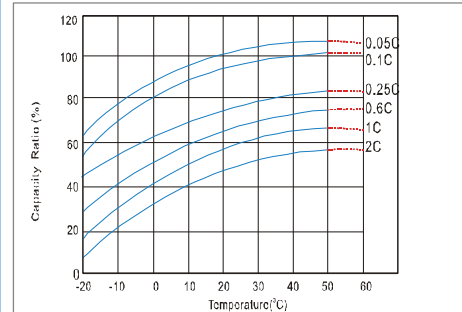
Performance Curves and Charts



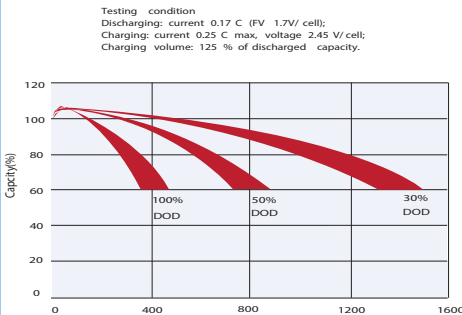
Discharge Characteristic (25°C)



Charge Characteristic (25°C)



Effect of temperature on capacity



Number of cycles Vs. Depth of Discharge